

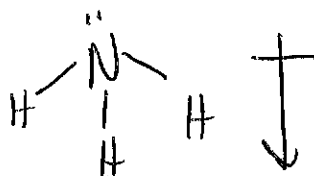
Which of the following compounds are covalent compounds? (circle)

Li<sub>2</sub>ON<sub>2</sub>H<sub>2</sub>C<sub>2</sub>Br<sub>4</sub>CaBr<sub>2</sub>

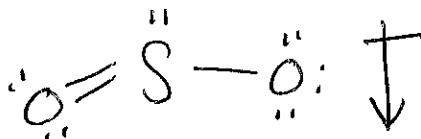
NaOH

Al<sub>2</sub>S<sub>3</sub>**Given: A compound containing 3 chlorine atoms and a nitrogen atom**Chemical Formula NH<sub>3</sub> (make sure you put the atoms in the right order)Name nitrogen trihydride

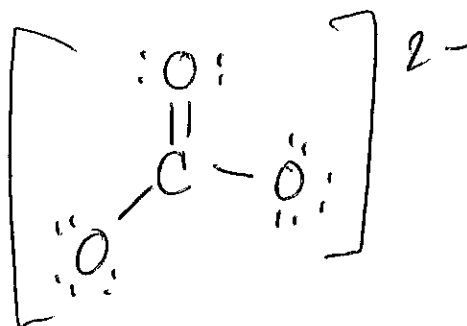
Molecular Structure

Shape trigonal pyramidalPolar or non-polar? (show the direction of polarity if it is a polar molecule)How many sigma bonds? 3 How many pi bonds? 0**Given: A compound that contains 2 oxygen atoms and a sulfur atom.**Chemical Formula SO<sub>2</sub>Name sulfur dioxide

Molecular Structure

Shape BentPolar or non-polar? (show the direction of polarity if it is a polar molecule)How many sigma bonds? 2 How many pi bonds? 1**Given: A polyatomic anion that contains carbon and three oxygens with a 2- charge.**Chemical Formula CO<sub>3</sub><sup>2-</sup>Name Carbonate ion

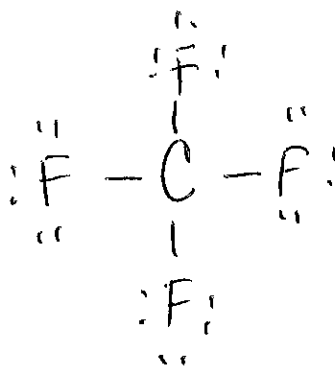
Molecular Structure (show all possible resonance structures)

Shape trigonal pyramidalPolar or non-polar? (show the direction of polarity if it is a polar molecule)How many sigma bonds? 3 How many pi bonds? 1

Chemical Formula CF<sub>4</sub>

Name Carbon tetrafluoride

Molecular Structure



Shape tetrahedral

Polar or non-polar? (show the direction of polarity if it is a polar molecule)

How many sigma bonds? 4 How many pi bonds? 0

Name the following compounds

PF<sub>3</sub> phosphorus trifluoride

N<sub>2</sub>Cl<sub>5</sub> dinitrogen pentachloride

Si<sub>4</sub>O<sub>7</sub> tetrasilicon heptaoxide

Write the formulas for the following compounds

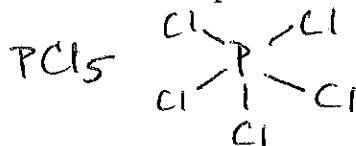
Pentanitrogen dichloride N<sub>5</sub>Cl<sub>2</sub>

Nonacarbon decabromide C<sub>9</sub>Br<sub>10</sub>

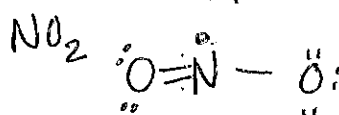
Octaselenium hexafluoride Se<sub>8</sub>F<sub>6</sub>

What are the three exceptions to the octet rule? Show examples of each

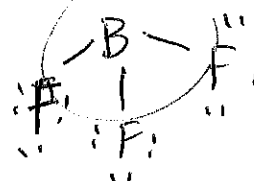
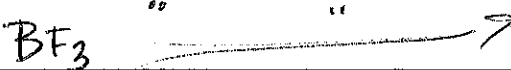
1. expanded octet



2. odd # of electrons



3. Too few electrons



In each of the following bonds, circle the atom that has the greatest attraction for the electrons in the bond.

